

ACUSON X300™ PE



ACUSON X300™ CONTROL PANEL

The ACUSON X300 knobology and user guide is the clinicians quick reference of system terms, functions and capabilities.

This guide was created to simplify the information contained within the Siemens ACUSON X300 PE User Manual.

For more detailed information please refer to your Siemens User Manual. For your convenience, the Siemens User Manual pages that correspond to the content in this guide, are reference at the bottom of each page.

Chapter 1, Knobology	p 1-2 thru 1-18
Chapter 2, System Setup	p 2-1 thru 2-11
Chapter 3, Patient Data	p 3-1 thru 3-5
Chapter 4, Exam Quick Sets	p 4-1 thru 4-28
Chapter 5, Phlebology Optimization Guide.....	p 5-1 thru 5-5



New Patient – activates new patient screen



Report – access to calculations report for current patient



Patient Data – used to modify patient data



Patient Browser – accesses DIMAQ-IP data

Exam - activates Exam Presets for active transducer



Presets - activates system Presets



Help – activates online instructions for use

Quick Set – stores a Preset with User preferences as a Quick Sets



Tab Key

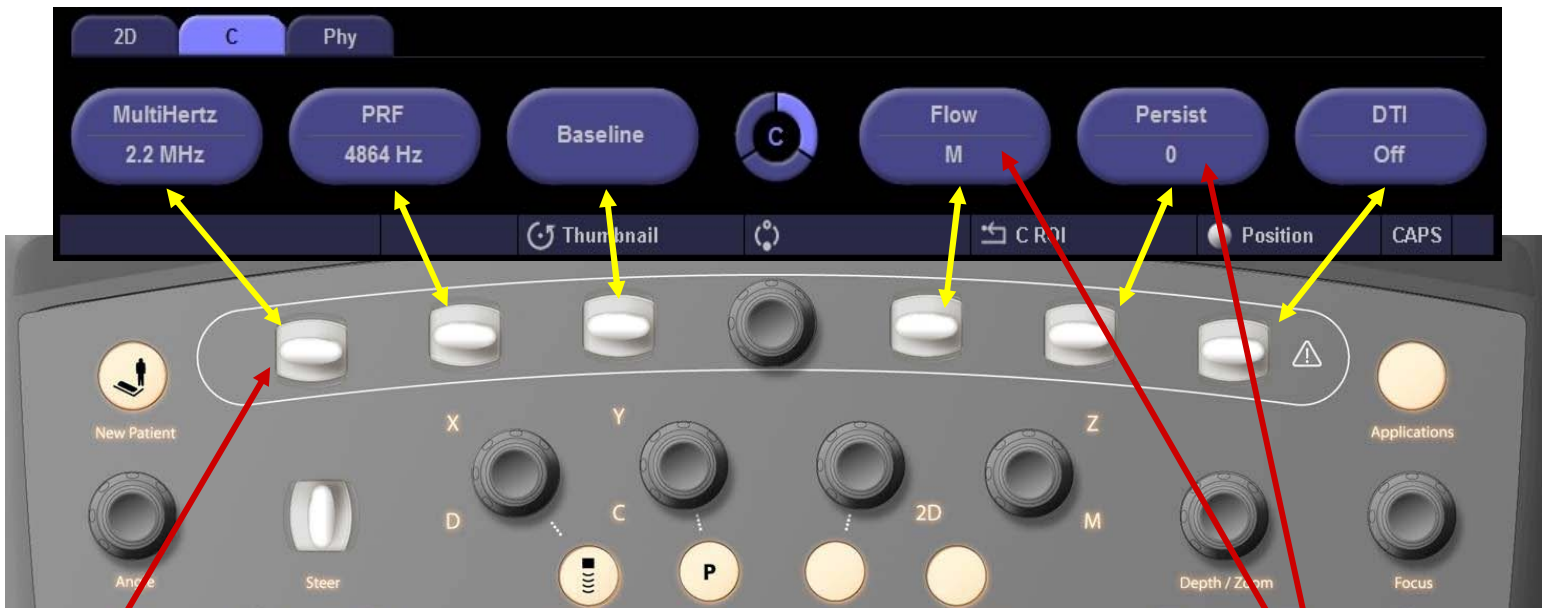


Caps Lock Key



Shift Key

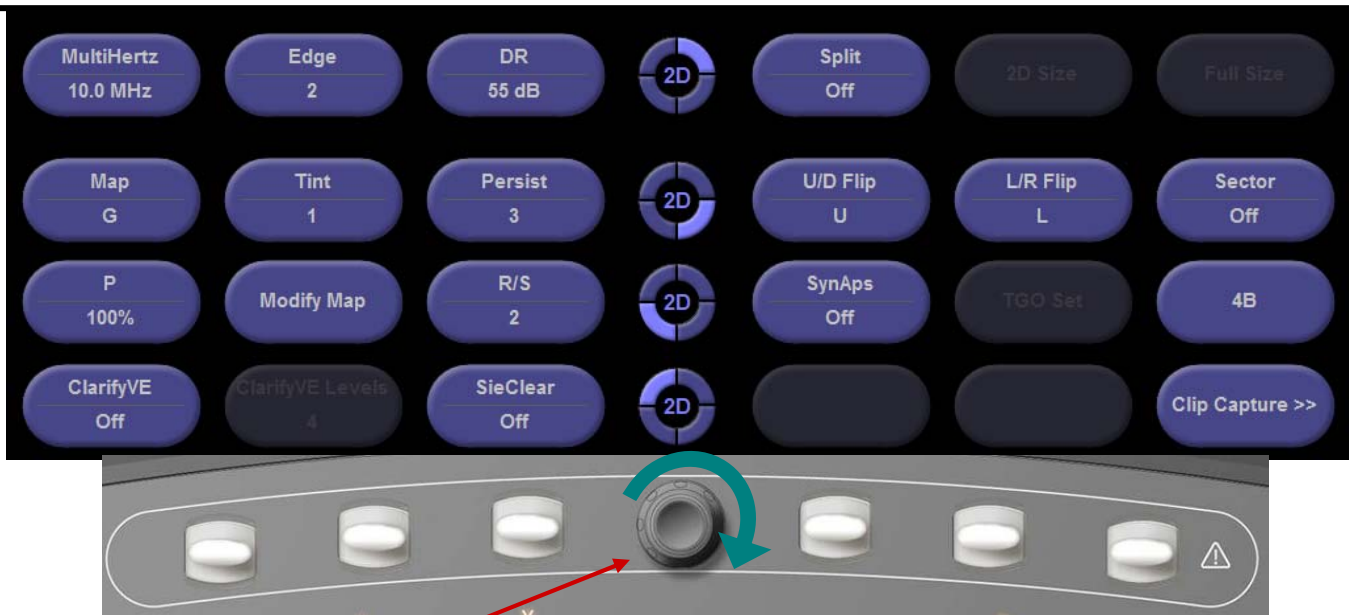
Toggle Keys & Soft Keys



Toggle switches can be adjusted up or down for the corresponding soft key menu item.

Use the page control knob to toggle between 2D, Color and Doppler modalities.





Rotate the page control knob to switch pages within the 2D menu.

MultiHertz - Allows you to toggle through the three available transducer frequencies.

Dynamic Range (DR) - Controls the overall contrast resolution of the image.

↑ DR adds more shades of grey for a smoother image.

↓ DR removes shades of grey for a more contrasting image.

Persist - Frame averaging function that determines the amount of image motion smoothing.

↑ Minimum Value: 0 - removes history, increasing the frame rate to create a sharper image.

↓ Maximum Value: 4 - adds history to the image, slowing the frame rate to create a smoother image.

Edge Enhance - Controls the sharpness of edges.

Minimum Value: 0 (Soft)

Maximum Value: 3 (Sharp)

Map - Select the grayscale map of your liking with 9 maps available (A thru I).

Map A (more shades of grey)

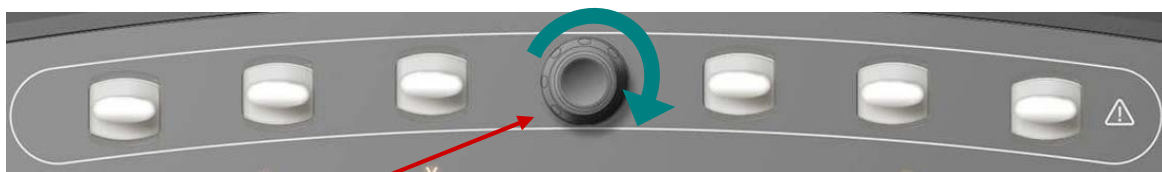
Map I (fewer shades of grey)

Tint - Colorizes the grayscale image

R/S - Controls the image resolution versus frame rate.

Minimum Value: 0 (Soft)

Maximum Value: 5 (Sharp)



Rotate the page control knob to switch pages within the 2D menu.

Measurement & Calculations Soft Keys

Distance - Is a simple linear measurement between two points.

Area - Calculates the area using the **Ellipse** or **Trace** method.

Ellipse - The system determines one diameter using the end points of the ellipse and calculates the second diameter.

Trace - The system determines the circumference and area using the hands free trace method segments.

Angle - Determines the Angle using two (connecting or intersecting) lines that you place on the image.

% Stenosis - Calculates the percentage of stenosis based on the area or diameter of the same vessel.

A-% Stenosis - Calculates the area % stenosis, comparing the cross-sectional areas of the same vessel.

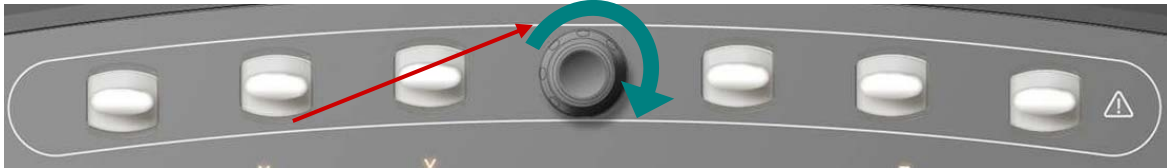
D-% Stenosis - Calculates the diameter % stenosis, comparing diameters of the same vessel.

Volume - Performs a volume measurement with either a distance measurement, ellipse measurement or Trace measurement.

Flow Volume - Measures the distance or area to calculate the blood flow volume.

A-Flow Volume - Is the estimation of blood flow based on the area of the vessel.

D-Flow Volume - Is the estimation of blood flow volume based on the diameter of the vessel.



Rotate the page control knob to switch pages within the Color Doppler menu.

TxFreq - Allows you to toggle through the two available color frequencies.

PRF - Controls the velocity range in color Doppler.

- ↑
PRF until there is wall to wall color filling without color aliasing for vessels with faster blood flow, arteries.
- ↓
PRF until there is wall to wall color filling without overfilling the vessels with slower blood flow, veins.

Persist - Averages color frames to improve sensitivity and reduce clutter.

Minimum Value 0: (Color corresponding to blood flow is replaced by another, faster rate)

Maximum Value 4: (Color corresponding to blood flow is replaced by another, slower rate)

Filter - Changes the transition point of the clutter filter to enhance low flow versus eliminating clutter artifacts.

R/S - Adjust the balance between the image line density (resolution) and the frame rate. The line density increases resolution and decreases frame rate creating a more compressed image.

Map - Displays measured velocity and/or variances as shades of color.

Priority - Changes the priority of color and B-mode data.

Smooth - Changes the amount of spatial smoothing in the image.

Minimum Value: 0 (Decreased motion smoothing)

Maximum Value: 4 (Increased motion smoothing)

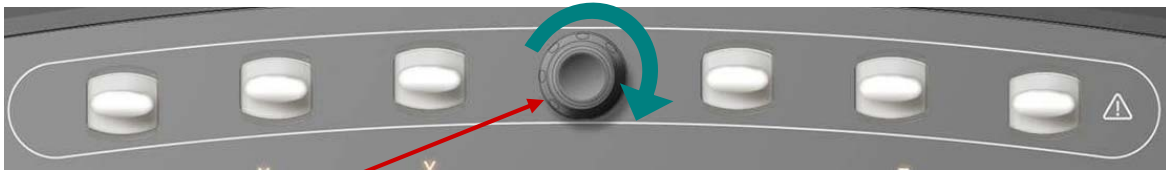
Baseline - Adjusts the relative baseline position up and down. A shift in baseline adjusts the range of displayed flow velocities without changing the system PRF.

Flow - Optimizes hemodynamic flow conditions by automatically adjusting the wall filter and PRF parameters for the selected Flow state.

Low - Maximum sensitivity to low velocity flows.

Medium - Balances between suppression and sensitivity of velocity flow.

High - Optimized for the high arterial flow common to pulsatile vessels and stenotic condi-



Rotate the page control knob to switch pages within the Doppler menu.

MultiHertz - Allows you to toggle through the three available transducer frequencies.

PRF - Controls the velocity range in pulse wave Doppler.

PRF to sample increased vessel blood flow, arteries or if the wave form wraps around the baseline .

PRF to sample slower vessel blood flow, veins or to increase the size of the wave form on the baseline.

Baseline - Adjusts the relative baseline position up and down. A shift in baseline adjusts the range of displayed flow velocities without changing the system PRF.

Gate - Adjust the size of the pulse wave gate. Gate should fit within the lumen of the sampled vessel. The gate should not touch the vessel walls.

Volume - Adjust the spectral wave volume.

Map - Displays measured velocity and/or variances.

Map A - Map H

DR - Dynamic Range controls the overall contrast resolution of the spectral wave form.

DR adds more shades of grey

DR removes shades of grey (more contrast)

Invert - Inverts the spectral wave form to or away from the transducer.

Ang 60/0/60 - Shortcut between 60 degrees angle correction and 0 degrees angle correction.

Update Rate - Adjust the amount of time for the spectrum update.

Ranges: Off, 2 sec, 4 sec, 8 sec

Doppler Toggle Keys

Velocity - Is the Distance over time measurement determined by a measurement marker placed along a vertical plane.

PI Auto - Use an automatic trace of the spectrum to determine a pulsatility index.

Acceleration - Acceleration or Deceleration of speed over the time traveled determined by two measurement markers.

Velocity Ratio - Calculate a ratio of two velocity measurements.

HR - Heart rate determined over one heart cycle.

RI - Pourcelot's Ratio: $RI = [PS-ED] / [PS]$ (4)

PI Manual - Use a manual trace of the spectrum to determine a pulsatility index

Flow Volume - Selects methods for estimating blood flow volume.

Time - Interval in milliseconds between two measurement markers.

M-Mode Toggle Keys

MultiHertz - Allows you to toggle through the three available transducer frequencies.

DR - Dynamic Range controls the overall contrast resolution of the M-Mode sweep.

Tint - Colorizes the M-mode sweep.

Edge Enhance - Distinguishes the contours of a structure during real-time imaging.

Sweep - Adjust the scrolling speed of the M-mode sweep.

Map - Selects a processing curve that assigns echo amplitudes to gray levels.

Measurement & Calculations Soft Keys

Distance - Is the vertical distance between two points in the M-mode sweep.

HR - Is determined over one heart cycle in 2D/M-mode.

Slope - Distance over time calculation determined by two distance measurement markers.

Time - Is the interval in seconds between two measurement markers.

Power Toggle Keys

TxFreq - Allows you to toggle through the two available color frequencies.

PRF - Controls the scale factor assigned to slow flow.

- ↑ PRF to sample increased vessel blood flow, arteries or if the wave form wraps around the baseline .
- ↓ PRF to sample slower vessel blood flow, veins or to increase the size of the wave form on the baseline.

Persist - Adjusts the time over which power data are processed in calculating the power amplitude display.

Filter - Balances the low flow sensitivity with flash suppression.

R/S - Adjust the balance between the image line density (resolution) and the frame rate. The line density increases resolution and decreases frame rate.

Map - Selects a processing curve that assigns flow amplitudes to color levels.

Priority - Adjusts the threshold for the amplitude of the Power display.

Smooth - Adjusts the level of spatial averaging used to smooth the display of the flow pattern.

Flow - Optimizes hemodynamic flow conditions by automatically adjusting the wall filter and PRF parameters for the selected Flow state.

Low - Maximum sensitivity to low velocity flows.

Medium - Balances between suppression and sensitivity of velocity flow.

High - Optimized for the high arterial flow common to pulsatile vessels and stenotic conditions.

Cine Toggle Keys

Frame Recall - Allows you to retrieve individual frames of the CINE loop.

Edit Start - Defines the beginning point of the CINE loop.

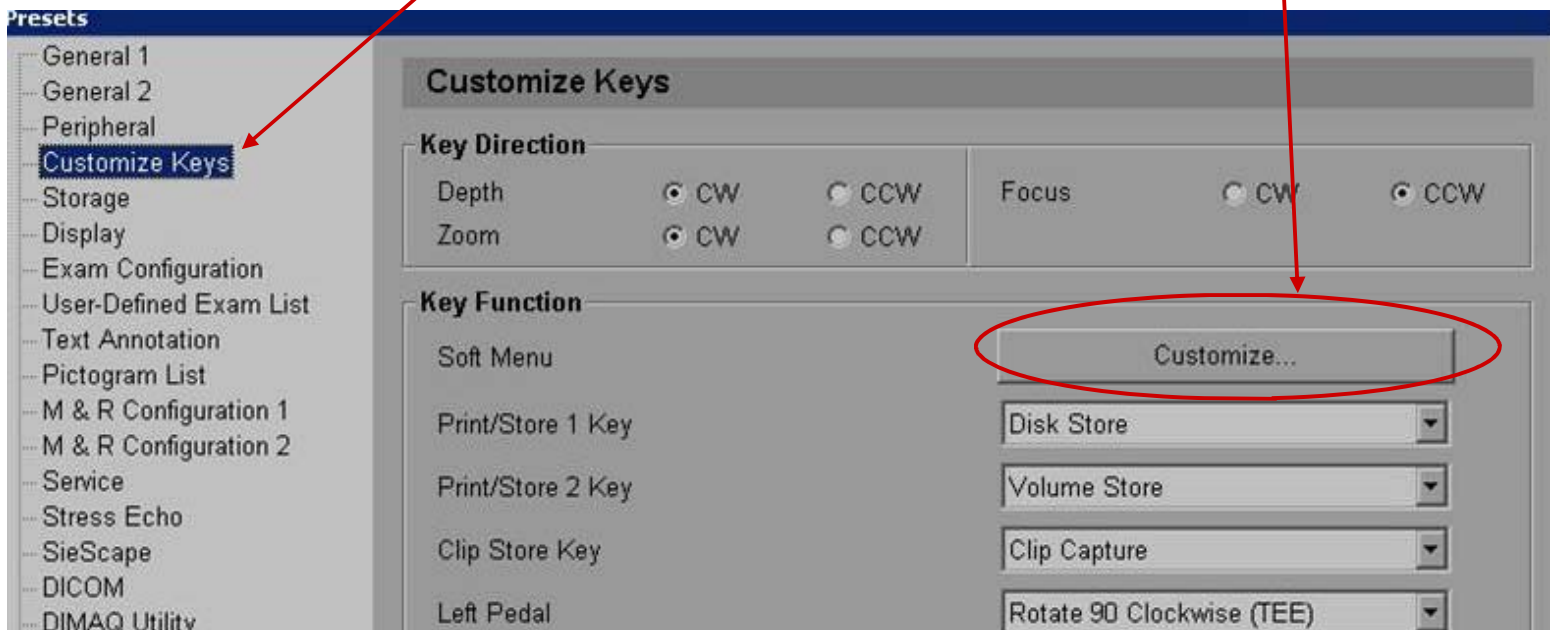
Edit End - Defines the ending point of the CINE loop.

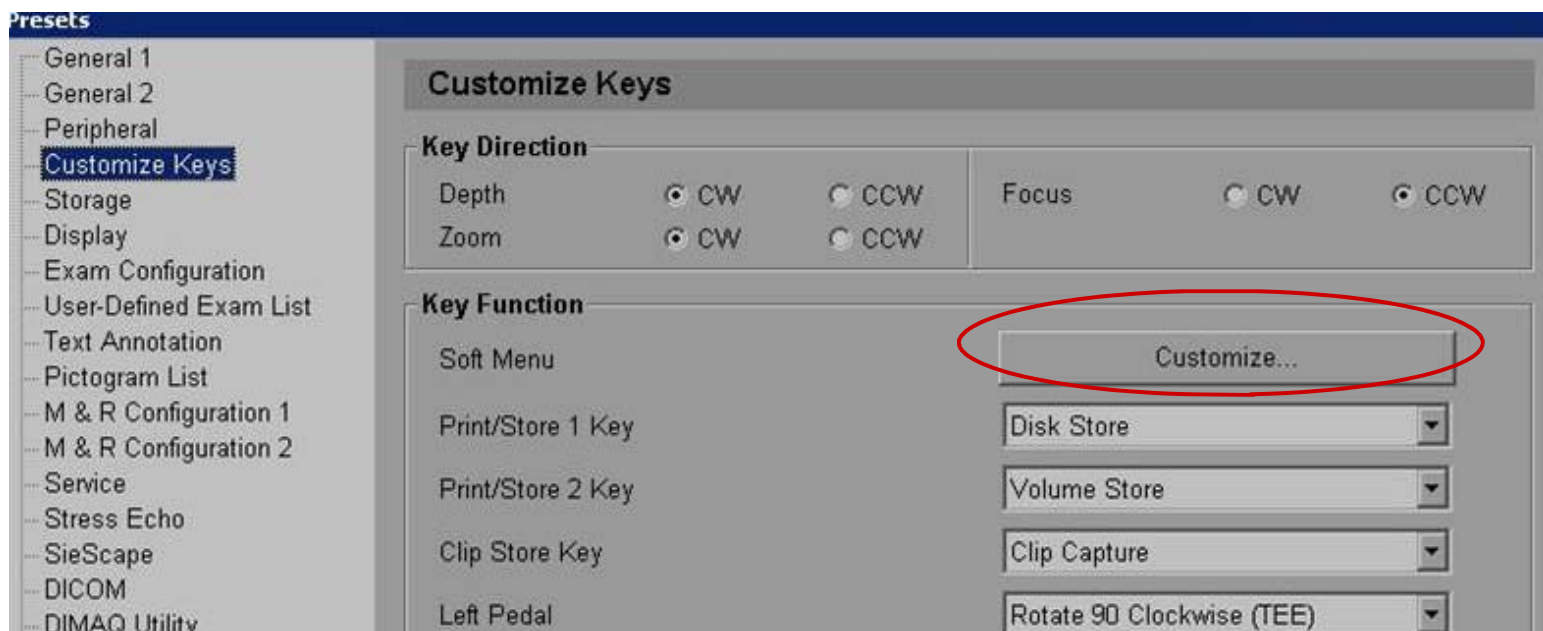
Edit Reset - Allows you to reset the beginning and ending points of the CINE loop.



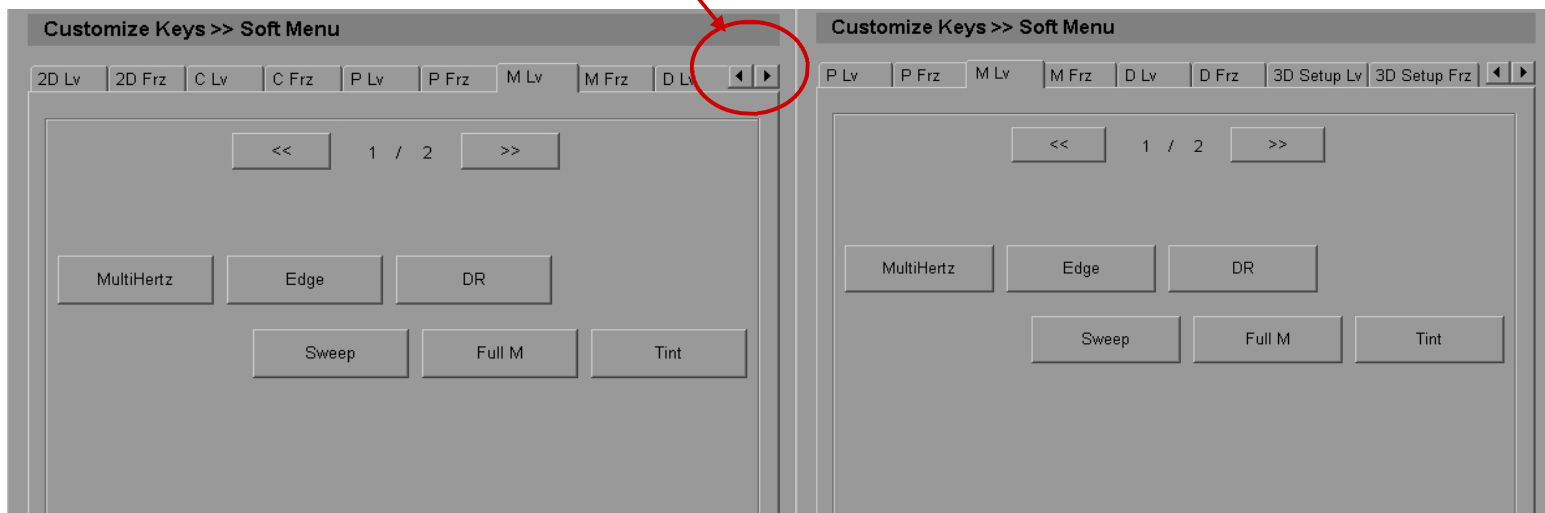
Soft Key Customization

- Used for image optimization
- Vary with active mode or function
- To customizable - Go to preset page,  select customize keys - select customize





Arrows allow you to toggle between the two menu screens shown.
Use folder tabs to select the customizable key functions.





- Pushing the knob initiates the desired mode
- Rotating the knob allows you to adjust the gain for the given mode

X, Y, Z - 4D ready keys

Doppler (D) - is used to “listen” to blood flow. Vascular Sonographers follow orientation standards when documenting direction of blood flow. Arterial blood flow travels toward the transducer and is represented as flow above the spectral baseline. Venous blood flow travels away from the transducer and is represented as flow below the spectral baseline. The spectral wave form can be measured in either time or amplitude and is used to document the amount of normal versus abnormal flow.

Continuous Wave (CW) -

Color (C) - is the color representation of the direction of blood flow. Vascular Sonographers document arterial flow, flow towards the transducer, with red color filling and normal venous flow, flow away from the transducer, with blue color filling.

Power Doppler (P) - demonstrates the back-scattered power of the Doppler signal allowing the scanner to display the presence of moving blood cells. ***It does not indicate the relative velocity or direction of flow.***

B - Mode (2D) - the two-dimensional diagnostic ultrasound representation of echo-producing interfaces in a single plane. This is a multi - function knob. **Turn the knob to adjust the image’s overall gain. Push the knob to exit out of Doppler and/or color Doppler.**

Tissue Harmonic Imaging (THI) - improves the contrast and spatial resolution to help eliminate low level echoes in the 2D image.



Trackball - Is used to control the system cine loop, color Doppler box size and curser.



Update Key – Is used to move between different functions (i.e. pw strip and image or measurement calipers).



Set Key - Is used to set a function (i.e. Calipers, Cine edits, color box size).

Example: Push down on the **C** knob to initiate color Doppler. The color box lines appear solid green. Press the set key; the box lines become dotted. Use the track ball to increase or decrease the vertical or horizontal size of the color Doppler box, then press set again to lock the box in the desired size.



Escape Key - Exits the currently displayed mode, function, or page and reactivates the previous mode, function, or page. Pressing the Escape/Priority key changes which tool is currently under the control of the trackball.



Caliper Key - Enters measurement menus or provides generic calipers. Press the Caliper Key a second time to obtain the 2nd curser. Press the Set key to lock the measurement. Press the Escape key to exit the measurement function.

Two User Defined keys - UD1 & TGO/UD2

Both UD1 and TGO/UD2 configuration 21 options:

4B	Split	Sector U/D	Flip	L/R Flip	Full Size
Full D	Full M	Dir Power	ECG	Exam	Report
Graph	Arrow	Clip Capture	Biopsy	Volume	Store
Rotate 90 Clockwise (TEE)			Rotate 90 Counter Clockwise (TEE)		

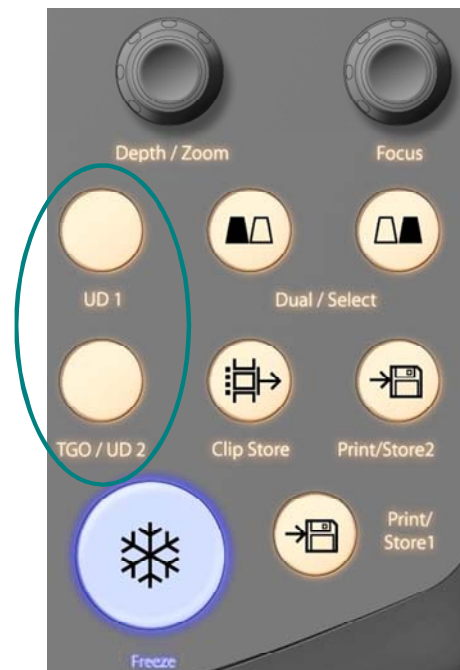
UD1 configuration options include:

Clarify VE

TGO/UD2 configuration options include:

TGO Update – (default)

UD1 and UD2 are global parameters – not exam specific



Three customizable keys for printing/image storage

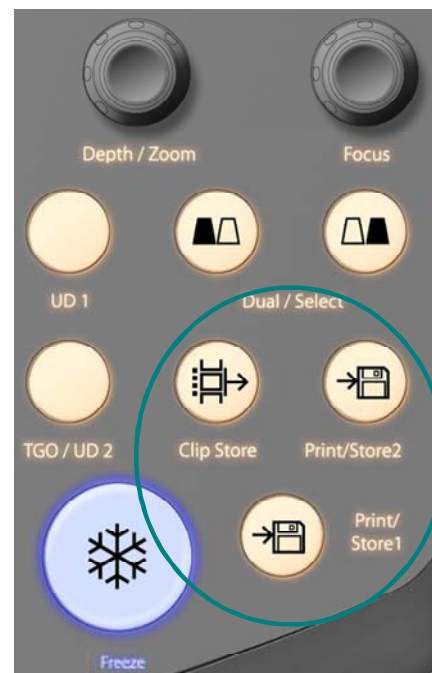
Print/Store1 and Print/Store2 configuration of 15 options:

B/W Print	Color Print	PC Printer	USB B/W	USB Color	Disk Store
Volume Store	Clip Capture	DICOM B/W Print	DICOM Color Print		
Disk Store & B/W Print		Disk Store & Color Print			
Disk Store & PC Printer		Disk Store & USB B/W Print			
Disk Store & USB Color Print					

Clip Store configuration of 3 options:

Disk Store Volume Store Clip Capture

Global parameters – not exam specific



Live

- Press to enter dual imaging from live on any transducer
- Able to change mode, depth, imaging parameters and frequency
- Cine available on both images

Frozen

- Press to enter dual imaging from Freeze
- Cine available on both images

Dual from Cine Workflow

- Supports measuring 2D cardiac measurements from the same heart beat
- Fast workflow
- Great for venous compression studies
- Great for 2D LV measurements



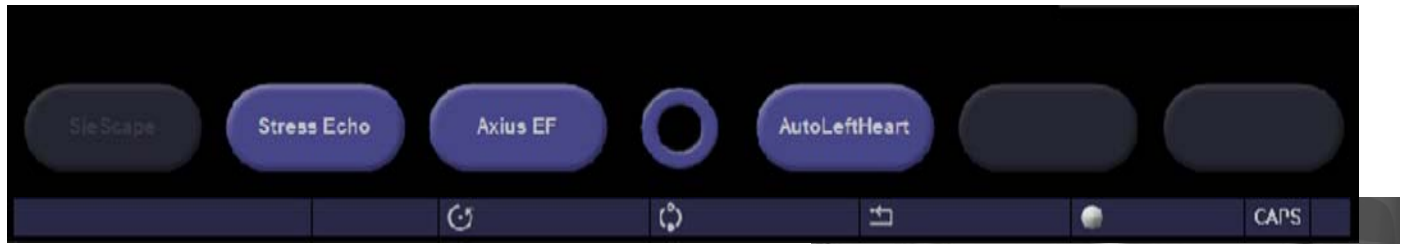
Zoom with live Split

- Turn on live split with soft keys
- Press zoom once
- Optimize zoom ROI size & position
- Select zoom a 2nd time

Split/Zoom Workflow

- Provides a reference image for zoom imaging
- No decrease in frame rate
- Live zoom box can be moved and resized

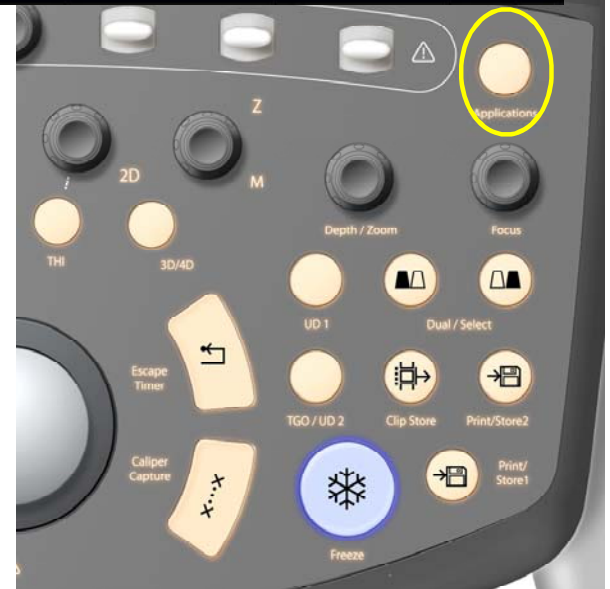




Live Applications

- Stress Echo
- Axis ejection fraction
- Syngo auto LH
- Syngo VVI
- Amm

Applications available depend on the type of clip mode



Select

- Press select to bring up the arrow cursor
- Works in conjunction with trackball for the thumb-nails functions
- Specific ROI control in stress echo
- Used for page scroll in Review

Focus

- Rotate to adjust the position of the focal zone.
- Press knob to increase the number of focal zones (up to 4 focal zones available).

Freeze

Freezes the image, sweep or spectrum on the screen. If an image or sweep is already frozen, pressing the **FREEZE** key restores real-time imaging.

Transducer

Allows the user to alternate between 2 active transducers.

Text Annotation on screen

- Is an archive text function.
- Press to initiate the on screen soft key menu.
- Work flow features:
 1. Position the cursor next to the anatomical phrase to highlight it.
 2. Use the trackball to drag the phrase to the desired location on the image.
 3. Press the set key to lock the position of the phrase on the image.

Library On - Activates the on-screen annotation library.

Arrow - Activates the on screen arrow. Use the trackball and “Set” to position the arrow.

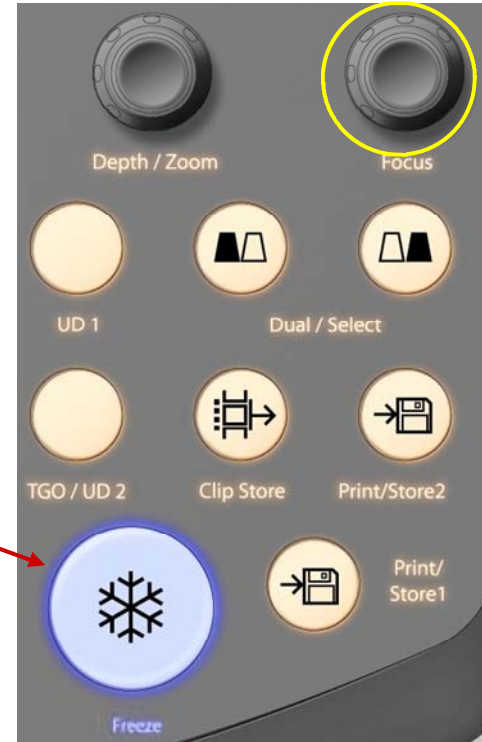
Delete Word - Will delete the word indicated (green text) by the text cursor.

Home - Will send the cursor to a pre-determined home position.

Hide Text – Temporarily hides all the text on the screen.

Home Set - Allows the user to indicate the “Home” position for the text cursor.

Clear Screen - Removes all annotations from the screen, including arrows and pictograms.



Pictogram Screen Menu

- Pictograms are based on the performed exam.
- Use the toggle key to select the desired pictogram.
- Use the Select knob to rotate the direction of the cursor to illustrate the image view as transverse or longitudinal.

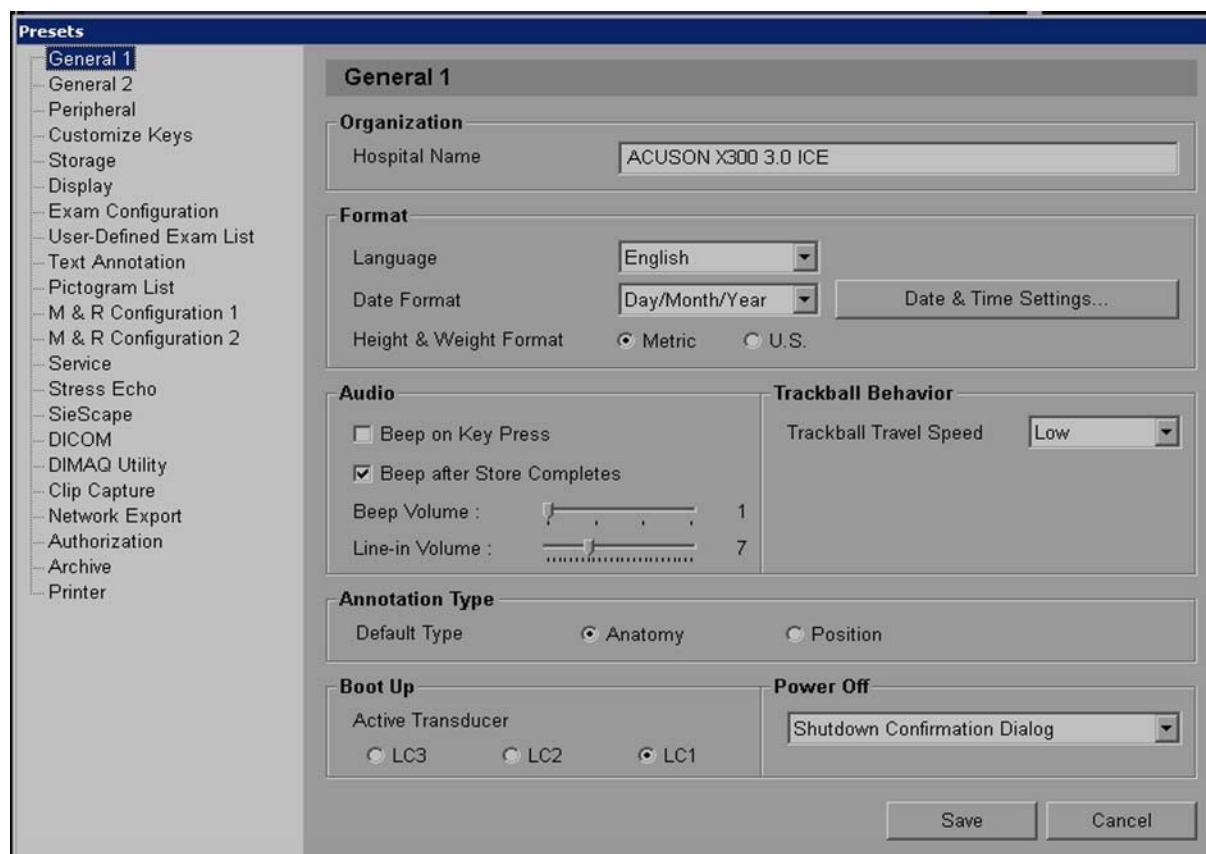


Press the **Preset Menu** button located on the top row of the key board to begin setting up your system.



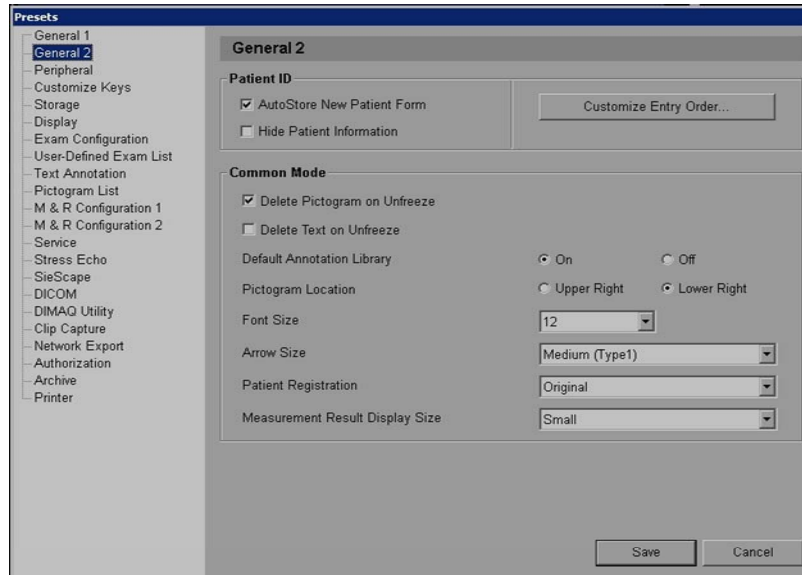
General 1 Menu

1. Enter the hospital name, establish date/time settings and format, designate height and weight formats, and select the system monitor, audio, and boot-up settings.
2. The Date & Time Settings button is only active if you are not currently in a patient study. Use the Date Format drop down menu to select: Month/Day/Year, Day/Month/Year or Year/Month/Day.
3. Sliding the Beep Volume curser allows you to adjust the volume of the Beep associated with pressing all onboard mode and user keys.



General 2 Menu

1. Allows the User to specify DGC settings, select the trackball speed, define information stored within images, enable patient demographic display and storage, and select the library of annotations for initial display.
2. Common mode functions.



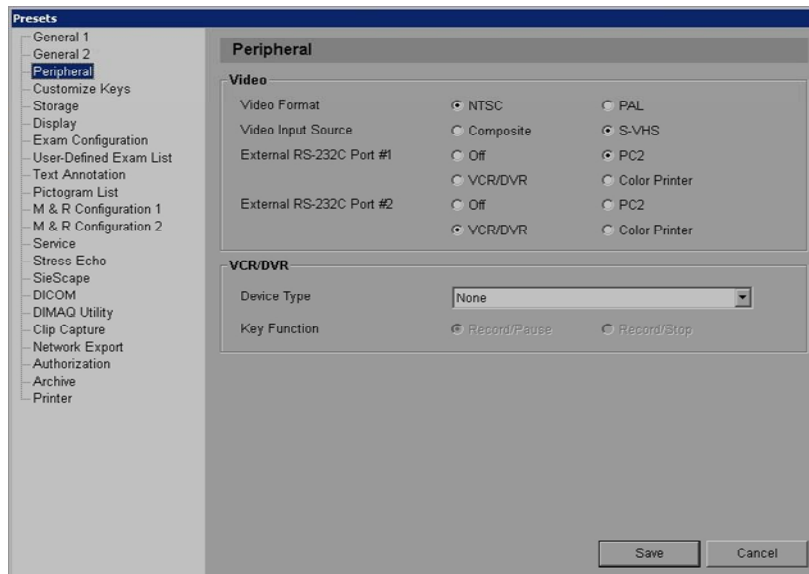
The screenshot shows the 'Presets' window with 'General 2' selected in the left sidebar. The main panel is titled 'General 2' and contains the following settings:

- Patient ID:**
 - ☒ AutoStore New Patient Form
 - ☐ Hide Patient Information
 - Customize Entry Order...
- Common Mode:**
 - ☒ Delete Pictogram on Unfreeze
 - ☐ Delete Text on Unfreeze
 - Default Annotation Library: ☒ On ☐ Off
 - Pictogram Location: ☐ Upper Right ☒ Lower Right
 - Font Size: 12
 - Arrow Size: Medium (Type1)
 - Patient Registration: Original
 - Measurement Result Display Size: Small

Buttons at the bottom: Save, Cancel.

Peripheral Menu

Designates Video controls as well as VCR/DVR selection

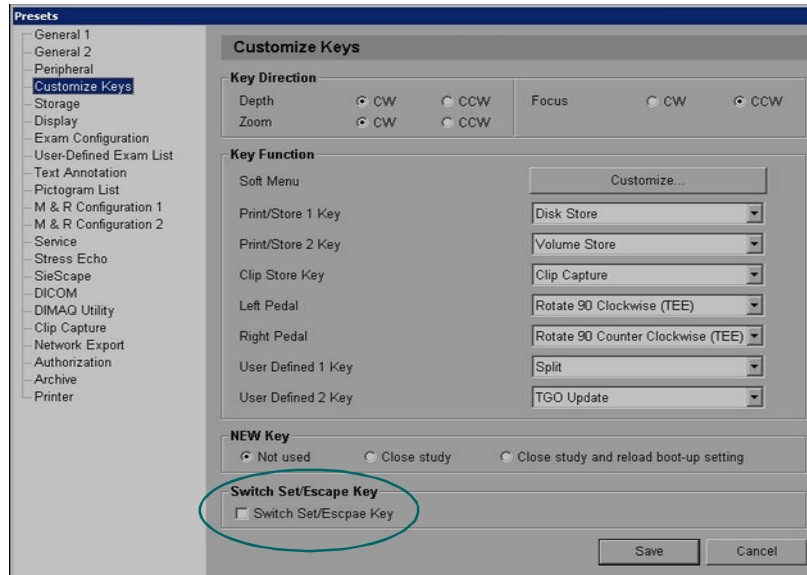


The screenshot shows the 'Presets' window with 'Peripheral' selected in the left sidebar. The main panel is titled 'Peripheral' and contains the following settings:

- Video:**
 - Video Format: ☒ NTSC ☐ PAL
 - Video Input Source: ☐ Composite ☒ S-VHS
 - External RS-232C Port #1: ☐ Off ☒ PC2
 - External RS-232C Port #2: ☐ Off ☒ PC2
 - ☒ VCR/DVR ☐ Color Printer
- VCR/DVR:**
 - Device Type: None
 - Key Function: ☒ Record/Pause ☐ Record/Stop

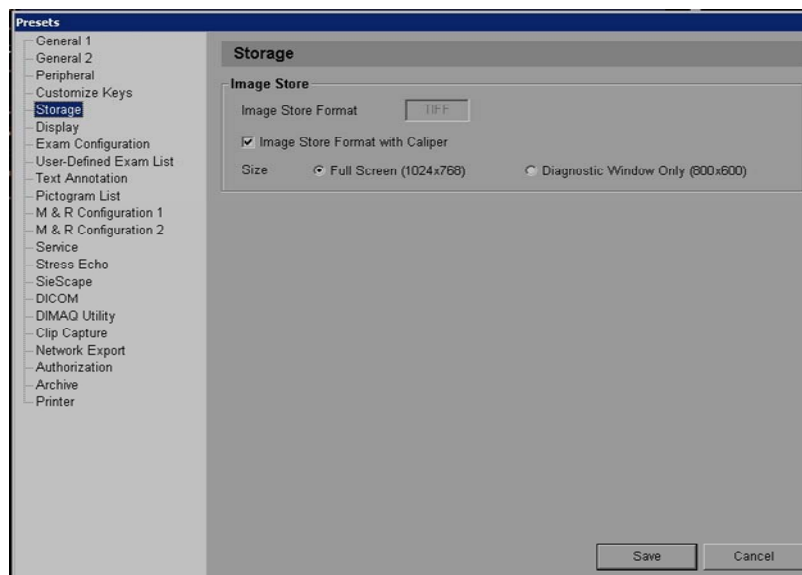
Buttons at the bottom: Save, Cancel.

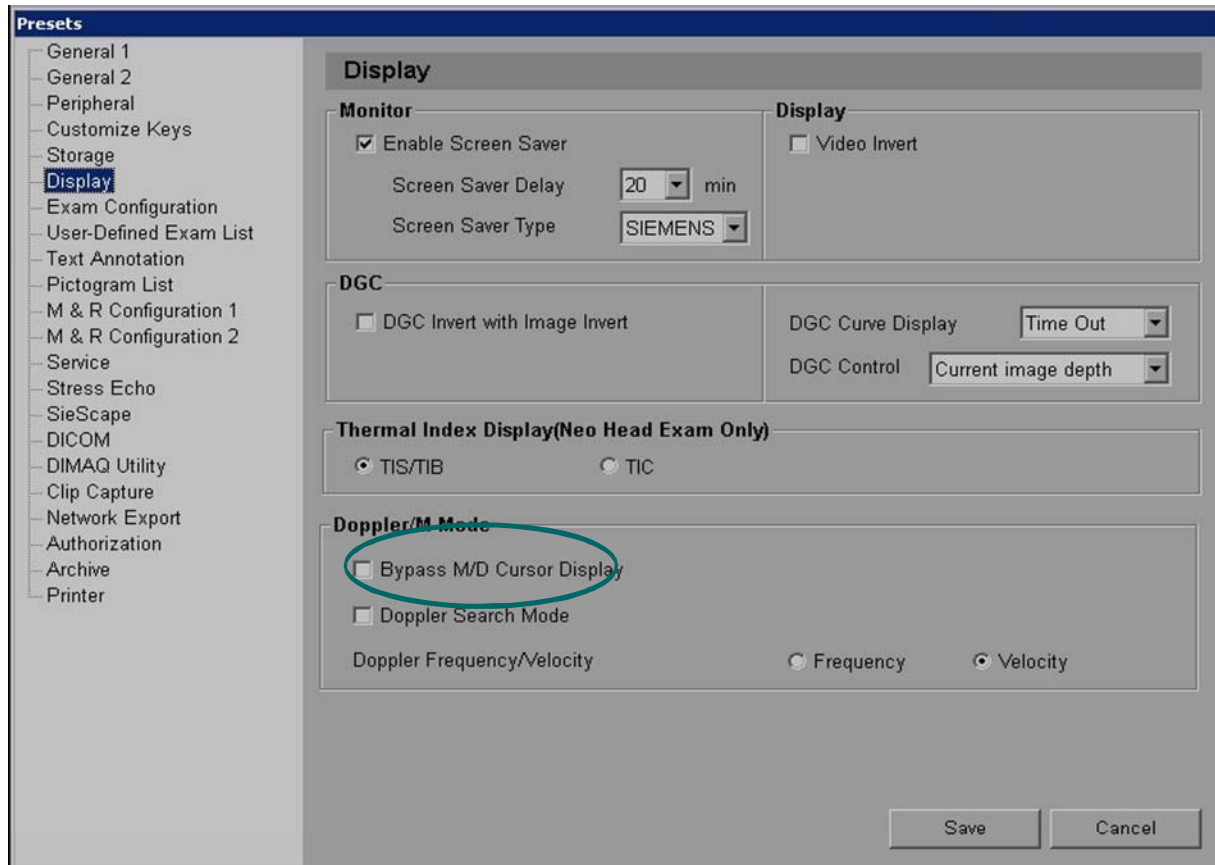
Customized Keys Menu - Check mark box to switch set/escape key locations



Storage Menu -

1. Check mark box to store image with calipers
2. Select how you would like your stored images to look (with or without soft keys)

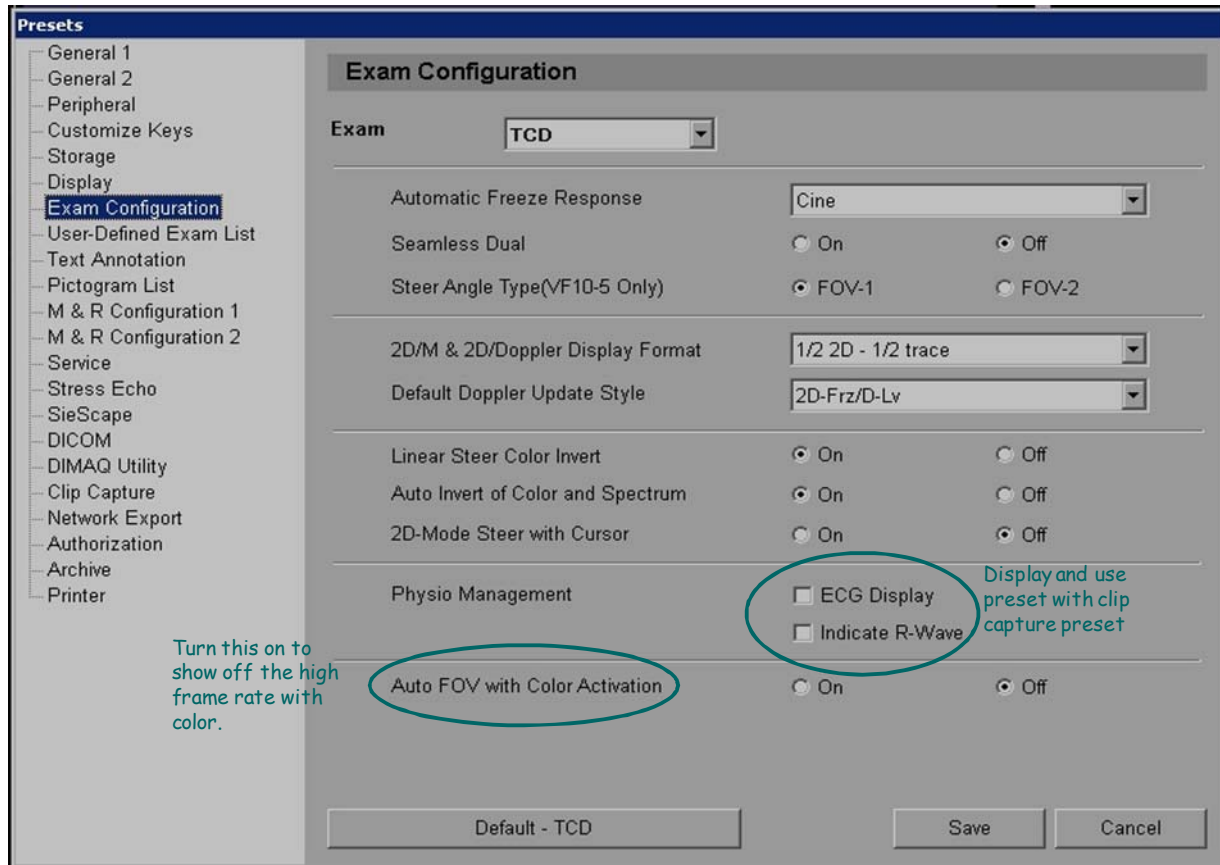




Display Menu

Specify the automatic responses when the system is frozen or unfrozen and establish Doppler and M-mode imaging settings.

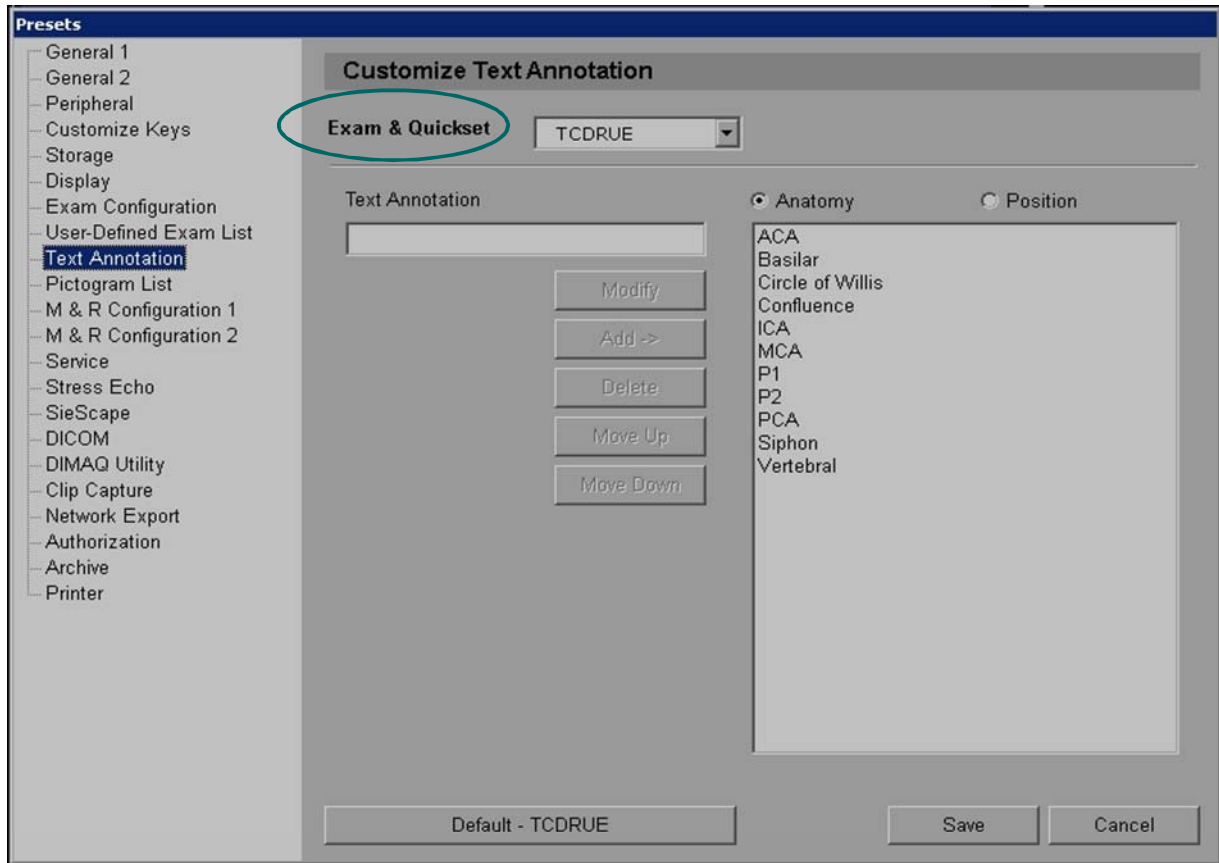
1. Enable the screen saver and set saver delay time as well as saver type.
2. Designate the way the DGC curve is displayed
3. Doppler/M-Mode
 1. Select the system response when the M or D control is pressed. Check the box to immediately display M-mode or Doppler. Un-check the box to initially display an M-mode or Doppler cursor in the 2D-mode image; the M or D control must then be pressed a second time for M-mode or Doppler to display.
 2. Doppler Frequency/VelocitY - User can select the method to display the pulse wave Doppler measurements.
 3. Measurement Result Display - User can designate the location on the monitor to display the pulse wave Doppler measurement.



Exam Configuration Menu

Specify the automatic responses when the system is frozen or unfrozen and establish exam imaging settings.

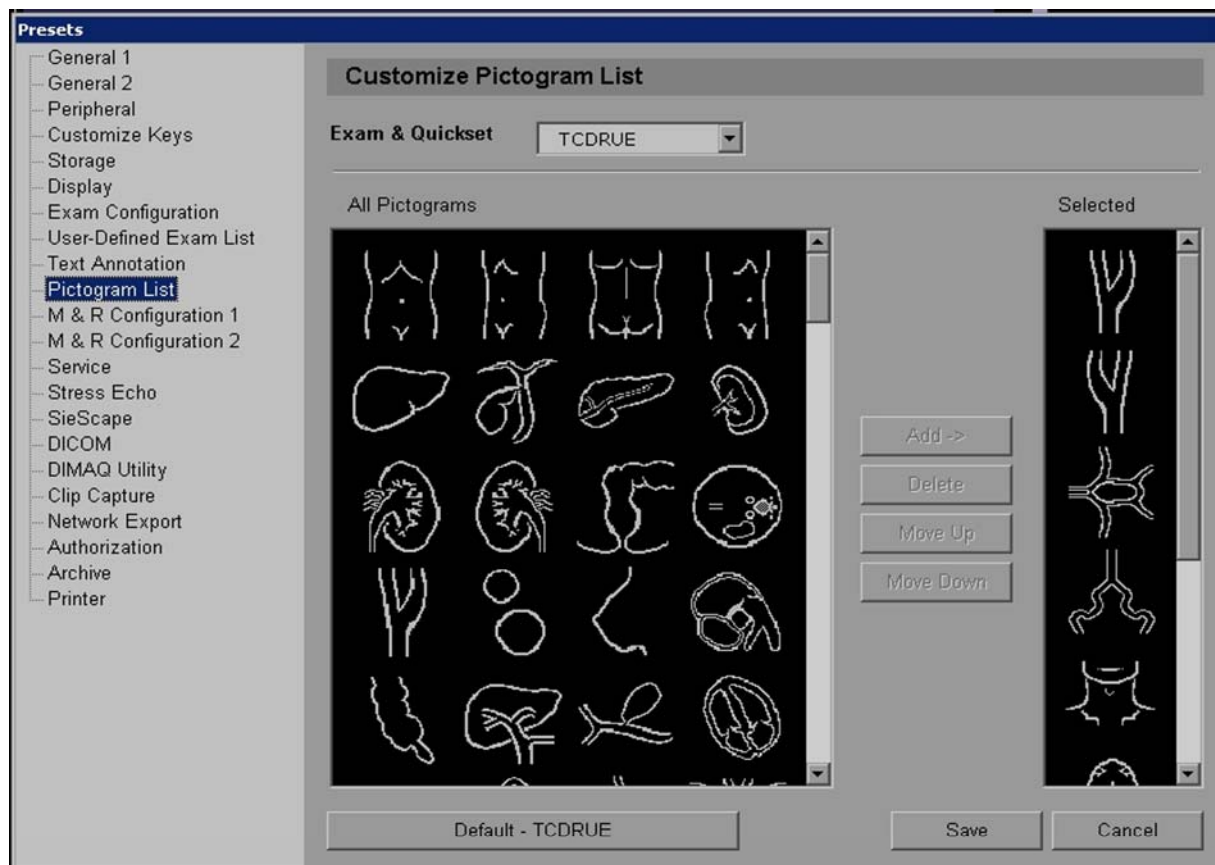
1. Select the automatic response for the track ball when the system is frozen
2. Determine the default Doppler update style (select 2D-lv/D-lv to set system for triplex automatically)
3. Measurement Result Display - User can designate the location on the monitor to display the pulse wave Doppler measurement.



Text Annotation Menu

Customize your annotations for each exam you perform.

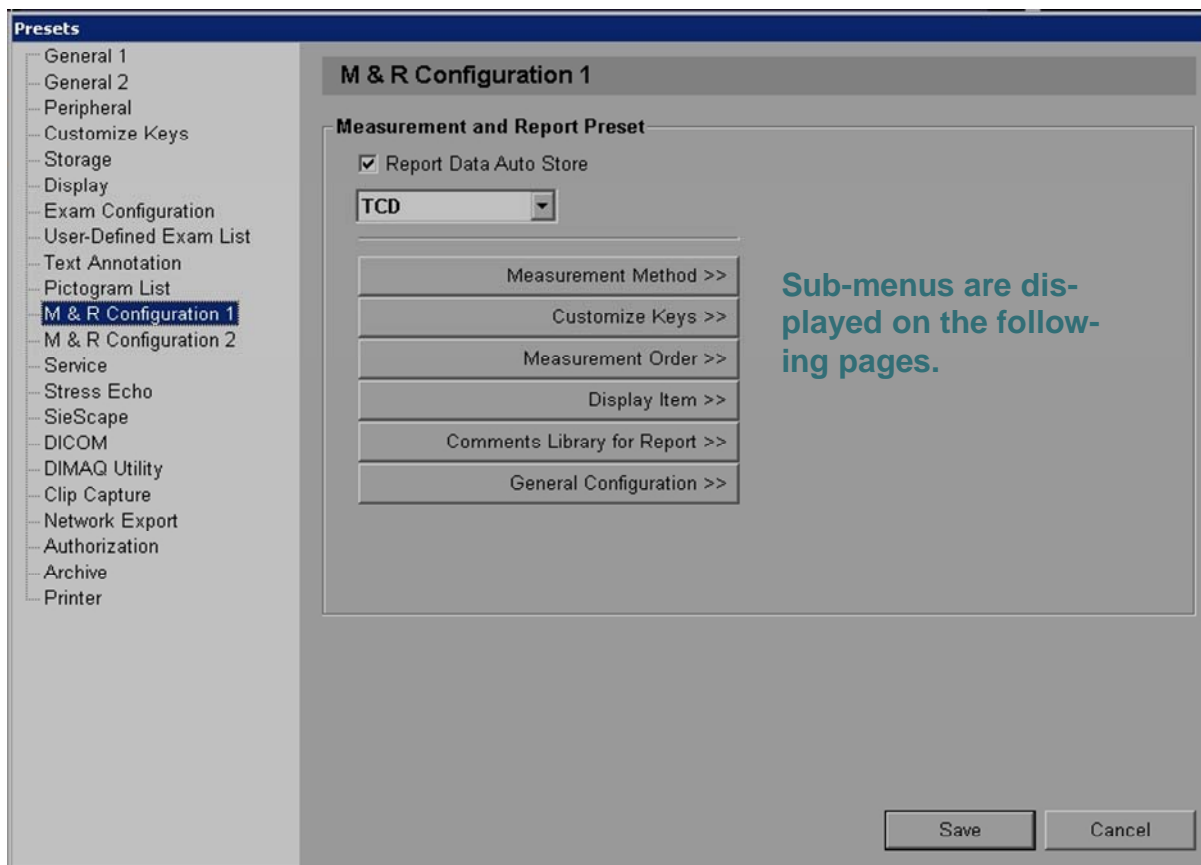
1. Select the exam or quickset to edit
2. Type in the desired text/annotation and click on add
3. To remove unwanted text/annotations, click on the phrase then click on delete.
4. Measurement Result Display - User can designate the location on the monitor to display the pulse wave Doppler measurement.



Pictogram List Menu

Customize pictogram libraries for selected Exam types or Quicksets.

1. Exam & Quickset - Displays the system factory preset or quick set name of the current exam.
2. All Pictograms - Displays all the possible pictograms for every exam available on the system.
3. Add - Highlight the desired pictogram you want to have available in the “Selected” menu box.
for the exam listed above. Click on the add button to move the pictogram to the “Selected” menu box.
4. Delete - Select the desired pictogram you want to remove from the “Selected” menu box. Click on the delete button to remove it.
5. Move - Highlight the pictogram and click on up or down to arrange the pictograms in the “Selected” menu box.



Measurement and Report Preset Menu

1. Measurement Method is used to establish a shortcut to a specific measurement method.
2. Item & Reference Selection is unique to Standard and Early OB exam measurement calculations.
3. Comments Library for Report
 - a. For use with OB, Early OB, GYN, Urology, Cardiac, Orthopedic, P-Vascular, C-Vascular, Venous, Fetal Echo, Pediatric Echo, Penile, TCD, EM exam types.
 - b. User can enter ten comments for exam types with reports.

The submenus of this page follow. Each Submenu is exam specific. The examples given are for Ped Echo.

Presets

- General 1
- General 2
- Peripheral
- Customize Keys
- Storage
- Display
- Exam Configuration
- User-Defined Exam List
- Text Annotation
- Pictogram List
- M & R Configuration 1**
- M & R Configuration 2
- Service
- Stress Echo
- SieScape
- DICOM
- DIMAQ Utility
- Clip Capture
- Network Export
- Authorization
- Archive
- Printer

M&R >> Measurement Order: Ped Echo

Heading Label **Customizable headings and measurement order**

Mode

Selectable Heading	Measurement Order
Pulmonary Valve	AV/LA
RV	Aortic Valve
Mod. Simpson	Mitral Valve
Single Plane	LV
Bi-Plane	Simpson BP
Bullet	Simpson SP
Cubed(2D)	Teichholz(2D)
Gibson(2D)	LV Mass A-L
LV Mass T-E	LA Vol (A-L)
LA Vol (Simp)	PISA(MR)
RA Vol (A-L)	Qp/Qs
RA Vol (Simp)	
PISA(MS)	

Default - Ped Echo

Presets

- General 1
- General 2
- Peripheral
- Customize Keys
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- User-Defined Exam List
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- M & R Configuration 1**
- M & R Configuration 2
- Service
- Stress Echo
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- DICOM
- DIMAQ Utility
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- Network Export
- Authorization
- Archive
- Printer

M&R >> Measurement Order: Ped Echo

Heading Label **Customizable labeling**

Heading

Selectable Label	Measurement Order
RV diam	AO
LVET	ACS
LVPEP	LA diam

Default - Ped Echo

Presets

- General 1
- General 2
- Peripheral
- Customize Keys
- Storage
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- User-Defined Exam List
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- Pictogram List
- M & R Configuration 1**
- M & R Configuration 2
- Service
- Stress Echo
- SieScape
- DICOM
- DIMAQ Utility
- Clip Capture
- Network Export
- Authorization
- Archive
- Printer

M&R >> Customize Keys: Ped Echo

2D-Mode | M-Mode | Doppler

Designate measurement methods for each exam you perform

Distance	Trace Length	Area
%Stenosis	Distance	Flow Volume
	%Stenosis	
	Trace Length	
	Volume	
	Area	A/B Ratio
	Flow Volume	
	Angle	Undo
	A/B Ratio	MDA Position

Delete Page

Default - Ped Echo Save Previous

Presets

- General 1
- General 2
- Peripheral
- Customize Keys
- Storage
- Display
- Exam Configuration
- User-Defined Exam List
- Text Annotation
- Pictogram List
- M & R Configuration 1**
- M & R Configuration 2
- Service
- Stress Echo
- SieScape
- DICOM
- DIMAQ Utility
- Clip Capture
- Network Export
- Authorization
- Archive
- Printer

M&R >> User Defined Label: Ped Echo

User-Defined 1 | User-Defined 2

Heading Name Delete Label

Label

2D-Mode 1	<input type="text"/>	Distance
2D-Mode 2	<input type="text"/>	Distance
M-Mode 1	<input type="text"/>	Distance
M-Mode 2	<input type="text"/>	Distance
Doppler 1	<input type="text"/>	Velocity
Doppler 2	<input type="text"/>	Velocity

Save Previous

Presets

- General 1
- General 2
- Peripheral
- Customize Keys
- Storage
- Display
- Exam Configuration
- User-Defined Exam List
- Text Annotation
- Pictogram List
- M & R Configuration 1**
- M & R Configuration 2
- Service
- Stress Echo
- SieScape
- DICOM
- DIMAQ Utility
- Clip Capture
- Network Export
- Authorization
- Archive
- Printer

M&R >> Display Item: Ped Echo

General

Default Measurement Title	2D-Mode	None
	M-Mode	None
	Doppler	None
Data Averaging	<input checked="" type="radio"/> Direct	<input type="radio"/> Average
HR Measurement Method	<input checked="" type="radio"/> ECG	<input type="radio"/> Doppler/M-mode
Display of Measurement Labels	<input checked="" type="radio"/> Measurement Type	<input type="radio"/> Last Used
Display AOLA	<input checked="" type="checkbox"/> AO/LA	<input checked="" type="checkbox"/> LA/AO
Default RAP	10mmHg	

Report

- ☒ Performing MD
- ☒ Referring MD

Define the layout of you patient data sheet and enter pre speci-fied report comments.

Default - Ped Echo
Save
Previous

Presets

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M&R >> Comments Library for Report: Ped Echo

Comments

Comment 1	
Comment 2	
Comment 3	
Comment 4	
Comment 5	
Comment 6	
Comment 7	
Comment 8	
Comment 9	
Comment 10	

Save
Previous

Presets

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M&R >> Measurement Method: Ped Echo

Default Measurement Method by Mode

2D-Mode	Distance
M-Mode	Distance
Doppler	Velocity

Default Measurement Method

Area	Trace
Volume	1 Ellipse
%Stenosis	A-%Stenosis
2D-Mode Ratio	Dist Ratio
M-Mode Ratio	Dist Ratio
Flow Volume	A-Flow Volume
PI Trace	PI Manual

Designate the measurement method using drop down menus

Default - Ped Echo Save Previous

Presets

- General 1
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M&R >> General Configuration: Ped Echo

General Caliper

Caliper Default Position	Menu
Caliper Size	Small
Caliper Pattern	<input type="radio"/> x <input checked="" type="radio"/> +
Measurement Results Background	<input type="radio"/> On <input checked="" type="radio"/> Off

Measurement Result Display

2D-Mode	Bottom
Doppler/M-Mode	Bottom

Define the size and position the calipers

Default - Ped Echo Save Cancel

Presets

- General 1
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DIMAQ Utility

Panel

☒ Enable

Active Panel: Thumbnails

Thumbnails

Columns: 1

Rows: 4

Printer

☐ None

☐ DICOM Print, BW

☐ DICOM Print, Color

☐ PC Printer

☒ USB BW Printer

☐ USB Color Printer

Do you want to see your thumbnails on the screen while performing an exam?

Save Cancel

Presets

- General 1
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- M & R Configuration 1
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Clip Capture

Compression

☐ Low (8:1)

☒ High (13:1)

Chronology

☒ Prospective

☐ Retrospective

Trigger Type

☐ Time Capture

☒ Beat Capture

☐ R-wave Only Capture

Time Trigger

☒ 2 sec

☐ 2 sec

Beat Trigger

☒ 2 beats

☐ 2 beats

R-Wave Delay: 0 msec

Acquisition Rate

☒ normal Default 30 Hertz

☐ high High = 60 Hertz

Save Cancel

Presets

- General 1
- General 2
- Peripheral
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Network Export

Host:

☒ Show network status

Export Host:

☐ Autostore to Network

Can be used for direct network export to PC

Presets

- General 1
- General 2
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Authorization

Change Password

Administration

Accounts

Password control for the strict HIPPA sites and account info assists to produce patient exam copy requests

☐ Administrator
☐ Disabled

Authorization Policy

☐ Login Required

☐ Retry Limits: Attempts
Retry Period: Seconds

☐ Autologout (Screen Saver)

☐ Password Expire: days

☐ Password Policy: Minimum Characters
 Lowercase Characters
 Uppercase Characters
 Special Characters
 Numeric Characters

Login screen message:

Presets

- General 1
- General 2
- Peripheral
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Archive

General

Study Archive History Deletion Policy

- ☒ Always Delete Study Archive History When Study is Deleted
- ☐ Allow Delete Study Archive History after Study is Deleted
- ☐ No Delete of Study Archive History

☒ Show Deleted Studies in Study Screen

CD/DVD

☒ Burn Showcase to DICOM CD/DVD

Patient data base management will be important with the capability to create large 60Hz clips

Save Cancel

Presets

- General 1
- General 2
- Peripheral
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- Printer**

Printer

Printer

PC Printer HP DESKJET 5100 SERIES

USB BW Printer MITSUBISHI P93D

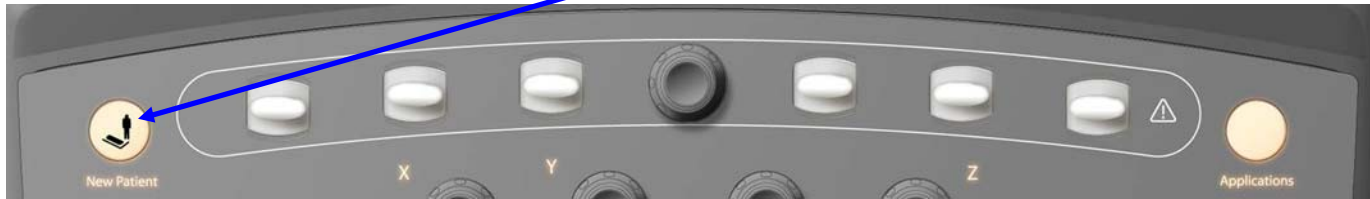
USB Color Printer MITSUBISHI CP30D/DW(USB)

Install... Status

Not related to this screen shot but good tip - USB ctrl+alt "S" saves a screen shot and system log of any screen. Follow prompt to know when the copy is complete.

Save Cancel

Begin a patient exam by press the **New Patient** key.

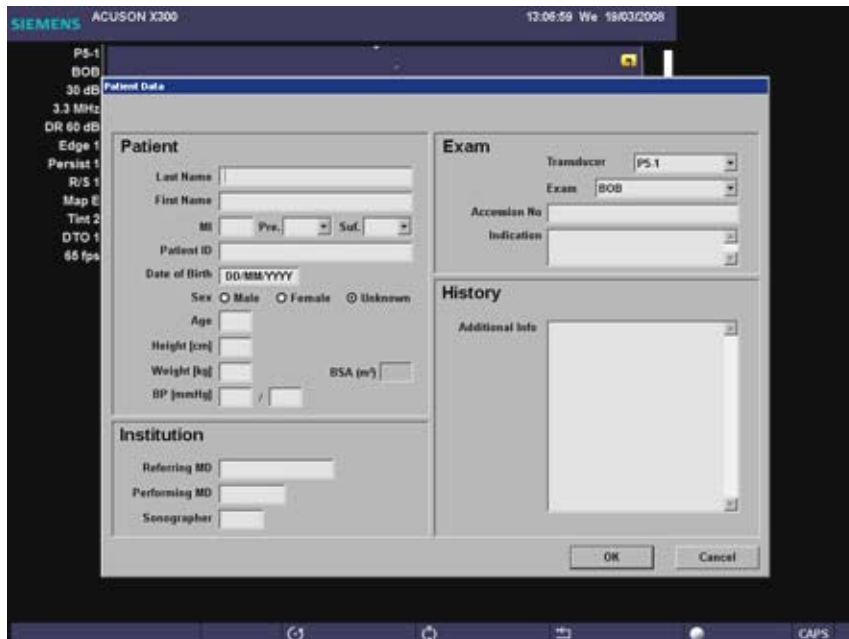


The **Patient Data** key is used to modify the patient information for the currently active exam.




Example: You enter Betty Lyn Smith born on March 2, 1947 into the system. You bring your patient into the exam room and verify their personal information and discover Betty Lynn Smith was actually born on March 22, 1947.

You will be able to correct her date of birth in the patient data form by pressing the Patient Data Key, not the New Patient key. Once you have made your corrections the system will archive the patient data form.

A screenshot of the Siemens ACUSON X300 ultrasound machine's Patient Data form. The form is divided into several sections: 'Patient' (Last Name, First Name, MI, Pre, Suf, Patient ID, Date of Birth, Sex, Age, Height, Weight, BSA, BP), 'Exam' (Transducer, Exam, Accession No, Indication), 'History' (Additional Info), and 'Institution' (Referring MD, Performing MD, Sonographer). The 'Date of Birth' field is highlighted with a blue arrow. The 'Exam' section shows 'Transducer' as 'PS-1' and 'Exam' as 'BOB'. The 'Institution' section has fields for 'Referring MD', 'Performing MD', and 'Sonographer'. The form is displayed on a Siemens ACUSON X300 screen, with the date and time '12:06:59 We 19/03/2008' shown at the top.

DIMAQ-IP Screen

The DIMAQ-IP feature is an integrated workstation with comprehensive on-board image and data management capabilities.

1. The image screen (DIMAQ-IP screen) displays the images for the currently selected study.
2. The study screen lists the studies that are saved on the selected disk (HD or CD/DVD).
3. Screens are accessed by pressing the **Patient Browser**  key on the keyboard.



4. To display the Image screen (from the Study screen), select the **Image Screen** button on the left of the screen.
5. To display the Study screen (from the Image screen), select the **Study Screen** button on the left of the screen.



DIMAQ-IP Screen Functions

1. Sort - by patient name, patient ID, date/time, images, archived, Mbytes.
2. Search - for a patient by their last name or ID, or enter the study date or date range.
3. Hide studies.
4. Delete - images and reports from studies that are stored on the system's HD.
5. Edit - can make measurements on images from the current examination. You can also store or print the image with the measurements.
6. Transfer - studies that are located on the system's HD or inserted CD/DVD.
7. Delete - studies from the system's HD.
8. Manage - system notifies you when the HD is nearly full indicating that un-archived studies will be immediately deleted.
9. Files saved to CD's/DVD's are labeled by the related patient ID. Study folders are labeled with the date and time of the study.



External Storage of Patient Exams

Backing up the system hard drive is user/clinic dependant. The easiest way is to back up a batch of patient exams at the end of the day, at one time. Insert a new CD into the CD tray.

1. Use the trackball to move the cursor over the first patient exam to be exported.
2. Press the set key to highlight the patient's information "blue" as done below.
3. Next, move the cursor to the last name that you want to export and let it hover over it. The text of the patient information will change from black to **blue**.
4. Leave the cursor hovering over the last name.

Next, press the **Shift**  and **Set**  keys at the same time.

This will select all the patient exams from the 1st one highlighted to the last one selected.

5. Un-check the DICOM button located in the CD information box. (If left checked, a free DICOM viewer will be downloaded to your computer when images are reviewed. All images are in a read-only format.
6. Leave the Tiff box checked.
7. Click on the export button. Under the export button you will see a blue time line tick off. Near the end of the export, you will see/hear the CD tray open and then close.
8. You have exported all patient exams to the CD.



Reviewing your patient exams on your PC

1. Insert the system back up CD into the CD tray of your computer.
 2. A window will open with a folder labeled Siemens, double click on the folder.
 3. Another window will open with two folders located inside. One labeled studies, the other labeled system.
 4. Double click on the studies folder. You will then see multiple folders that are labeled by exam dates.
 5. Open the first folder by double clicking on it and again on the folder inside.
 6. You now have a window with folders labeled clips, exports, images and reports, as well as two adobe PDF files.
 7. Double click on the images folder. You can now select the image in a slide show or copy and paste them to a specified folder on your desk top.
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